SCIENCE NEWS INDEX

Vol. 104, Nos. 1-26, July-Dec. 1973, pp. 1-408

SCIENCE SERVICE, WASHINGTON, D.C. 20036

A

AIP carrier test 6
ATP
  Primeval molecule .. 102
  Tonic stimulation .. 279
Abelson, Philip H. ... 229
Aboriginal lands 206
Academic ability 231
Accelerator,
  Charged-particle ... 235
Accelerator, 300 GeV
  No quarks 312
Accidents 87
Acetylcholine 90, 219
Actin, Sequenced 154
Acupuncture
  Electrophotographs 202
  Psychological aspects 184
Adair, Gary 374
Adamenko, Victor 202
Adams, John B. 221
Adams, M. W. 42
Adult education 231
Africa/South America . 155
Agarwal, Kanhiya Lal . 132
Aggarwal, Yash P. ... 200
Aggression
  And warfare 250
  In the zoo 170
  Self-evaluation 184
Aging bones 247
Agricultural pest 179
Agurell, Stig 90
Ahlgren, Andrew 230
Air pollutants
  Impact of 280, 281
Air pollution,
  Lichen 156, 296
Air pollution shelters . 331
Air Quality Monitoring 296
Air quality proposals .. 36
Air quality standards . 163
Aircraft emissions 23
Alanine tRNA gene 132
Alaska pipeline 163
Alcator fusion device . 380
Alcohol, Vitamin B 8
Alcoholic mothers 6
Aldehydes 349
Allen, Bruce 379
Allen, Robert C. 154
Allergy antibodies 294
Aloia, John 247
Alpha machine 132
Altered states of consciousness ... 298-300
Altman, Sidney 132
Alvin, Titanium hull ... 181
Amdur, Mary O. 281
American Medical Association 375
American Psychiatric Association 106, 230
American Psychological Association 150, 389
American society 88
Amino acid balance ... 43
Amino acids
  Actin sequence 154
  Protein 148
Amos, Larry 204
Anderla, Georges 74
Anders, Edward 340
Anderson, Don 201
Anderson, Jack 295
Anderson, John D. 356, 372
Andrews, James E. 58
Anemia, Virus-linked ... 104
Angell, C. A. 108
Annis, Robert C. 312
Anomalous water 133
Antarctic ice sheet 285
Antarctica 374, 391
Anthropologists 60
Antibodies, Nasal 263
Antibody switch-off ... 294
Antineutrino plus electron 164
Antiprotons 9
Ants, Food-growing 232
Anxiety 8
  Antianxiety drugs ... 389
Aperture synthesis 118
Apollo-Soyuz Test Project (ASTP) ... 78,79, 141
Apollo Telescope Mount 324, 344
Appalachian autumn ... 263
Appetite increased 314, 402
Arabella 85, 103, 196
Archimède bathyscaphe 104, 181
Arctic, Colder 58
Arid land crops 22, 26
Arizona Trade-off Model (ATOM) 267
Arnon, Daniel I. 247
Arp, Halton 117
Arrhenius, Gustav 340
Artificial gene 132
Artificial intelligence (AI) 76, 77, 137
Asbestos
  Lake Superior 253
The Ascent of Man 362-365
Ash, Roy C. 87
Aspirin, Lymphocytes ... 206
Asteroid belt 103
Asteroid Toro 173
Astroblemes 183
Astronauts
  Reorganizing 379
  Selection of 141
  Skylab 2 ..... 55, 69, 84, 103, 123, 135
  Skylab 3 ..... 276, 324, 325, 344
Astronomy
  Image-tube 316, 317
  Optical 381, 382
  Special issue 97-128
Asunmaa, S. K. 341
Athletes 380
Atlantic coastlines 155
Atlantic opening 278
Atmospheric mercury ... 155
Atomic energy
  Thermonuclear fission 292
Auger, Pierre 229
Australia
  Bureau of Environmental Studies ... 206
Australopithecus africanus 310
Automobiles
  Water polluters 27
Awad, Essam 94
Axtell, J. D. 212

B

BBC TV programs 363, 365
Babies
  Smoking mothers ... 168
Bacterial destruction ... 154
Bacterial growth 309
Baguley, Diane M. 286
Baker, William O. 52, 53, 343
Ball, Gwendolyn 349
Ball, John A. 30, 167
Ballard, Robert 104, 181
Balloon-borne antennas 278
Baltimore, David 148
Banerjee, Shailesh P. ... 229
Barber, Theodore X. ... 184
Barham, E. G. 231
Barn owls 109
Barnard's star 9
  No wobble 342
Baroza, Morton 40
Bartlett, Donald, Jr. ... 281
Baruch, John 164
Basaltic glass 285
Batch, Donald L. 37
Bathyscaphe Archimède 104, 181
Beacon Explorer C 155
Bean, Alan L. 23, 55, 69, 103, 123, 135, 196, 214
Bear or racoon 227
Beckstead, H. D. 231
Bedish, John 37
Beef and cheese 154
Beer, Bernard 314
Bees, Dancing 244
Behavior modification
  APA task force 106
  Ethics questioned ... 20
Belton, Michael J. S. ... 221
Bemis, C. E. 205
Benacerraf, Baruj 294
Benson, Herbert 377
Benton, E. V. 235
Beregovoj, Georgy 388
Berger, Karl 105
Berry, Charles A. 55, 141
Beryllium hazard 44, 155
Beta Lyrae 216
Bicentennial
  Science projects 165
Bigelow, Robert S. 250, 251
Biofeedback techniques 132
Biological controls
  Insect pests 40, 41
Biomedical research 23, 181
Biomes and ecosystems 156
"Bioplasma body" 204
Birky, Merritt M. 348
Black, David C. 9
Black, John H. 264
Black hole
  Cygnus X-1 341
  Electrically charged ... 262
  Paradox 228
  Scorpius X-1 264
  Tunguska 180
Blackbody background 108, 113
Blackwell, Barry 389, 390
Bladder cancer 58, 402
Blastocysts transferred 167
Blood pressure control 217, 347, 378
Blood supply system ... 35
Bobcats 58
Bogart, Donald 135
Bokhan, P. A. 380
Bond, Howard E. 326
Bonner, James 168
Boozer, Allen H. 346
Borlaug, Norman E. 28
Borobudur restoration ... 331
Boron 11 fission 292
Bourbon consumption ... 203
Bowen, Zeddie 391
Bower, R. R. 199
Boyd, R. L. F. 341
Boyle, Thomas J. 245
Bradley, Raymond S. ... 58
Brain
  Chemicals 218
  Cross section 134
  Developing 27
  Lesions 152
  Migraine action 109
  Transplant 247
Brain waves 218, 219
Brand, Vance D. 23
Branscomb, Lewis M. ... 343
Braton cycle hydrogen engine 135
Breast cancer
  diagnosis 235
Bregman, Jesse 341
Brice, Neil M. 216
Bright, Richard 349
Brinegar, Claude 71
Bristlecone pine 197
Broadfoot, A. Lyle ... 375
Bromley, Julian V. ... 170
Bronowski, Jacob . 362-365
Brooke, Gordon 164
Brooker, Gary 361
Brown, Denny 91
Brown, George, Jr. ... 52
Brown, Joseph E. 27
Brown, Michael S. 314
Brown, Robert L. 101
Brusewitz, Gunnar 261
Bubble chamber, CERN 164
Bubble chamber, NAL 246
Bucknall, R. A. 347
Buhler, Donald R. 285
Buoys, Giant 360
Burbidge, E. Margaret 358
Burke, W. L. 358
Burnazyan, Avetik 311
Bus becomes train 170
"Bus only" lanes 170
Bushuyev, Konstantin D. 23, 78

C

C-54 aircraft 183
CERN, Gargamelle 164
Cade, Thomas J. 158
Cadmium 45
Calico site specimens 53, 54
Caloric intake 157
Calvert, J. G. 281
Cameron, A. G. W. 25
Camp lanterns 155
Campbell, Howard W. ... 232
Canaveral 183
Cancer
  Abnormal chromosome 402
  Bladder 58
  Cervical 61
  Colon 57
  Hodgkin's 206, 358
  Lymphatic 35
Cancer cells 149, 402
Cancer detection 235
Cancer research center 56, 57
Cancer treatment 235
Cancer virus 3
Cannabis strains 231
Cape Kennedy renamed 183
Carbon monoxide
  Constant levels 155
  Health hazards 280, 281
  Ocean's share 155
  Research 348, 349
Carbonaceous chondrites
  Organic compounds 340
Carithers, W. C. 9
Carleton, N. P. 154, 232
Carlson, R. W. 212
Carlucci, Frank C. 87
Carmichael, Leonard ... 182
Carnow, Bertram W. ... 281
Carpenter, R. L. 108
Carr, Gerald 276, 324, 344
Carr, Michael 26
Carr, Michael H. 75
Carr, Roderick A. 155
Carrithers, W. C. 264
Carter, Tim Lee 68
Cat virus 104
Catecholamines 219
Cat's tail 278
Cavisco, David 235
Cell membrane leak ... 109
Cells, Corrected 373
Cells, Four-nuclei 167
Central America
  Broken plate 26
Ceman, Eugene 379
Cervical cancer 61
Cess, Robert 84
Chaigneau, Marcel 285
Chambers, Leslie A. ... 281
Chang, Al 168
Channel tunnel 180, 326
Chanowitz, Michael S. ... 188
Chapman, Clark R. 173
Charged-particle radiography 234, 235
Chaves, John F. 184
Chemical synthesis 137
Children, Cholesterol ... 109
Children, Deformed 6
Chimpanzees
  Cognitive mapping ... 360
  Could develop speech 170
China, Scientific institutions 14, 15
Chitre, D. M. 262
Cholesterol, High 314
Cholesterol, Lowered ... 154
Cholesterol test 109
Chondrites 276, 277
Christensen, Elmer 165
Chromosome, Abnormal Bladder cancer ... 402
Chromosome, Human ... 334
Chromosphere 121
Cinanserin 215
Cities
  Air quality I-IV 71
  Mile-high 267
City lights
  Observatories 381, 382
Clark, Eugenie 28
Clark, Kenneth 363, 365
Clayton, Robert N. 277
Clean Air Act
  Energy program 163, 164
  Standards for cities ... 71
Clear-cutting 138-140
  Changes watershed ... 156
Clements, William P., Jr. 391
Climate changes 229
  Drought 197
  Irrigation effect 26
  Man-made heat 9
  Thermal pollution ... 253
Climent, Carlos E. 184
Cloning 334
Cloud seeding 34, 38
Clynes, Manfred 152
Coal
  Gasification 12
  Indian reservations ... 11
  Liquefaction 12
  R & D funds 5
  Research 10-12
  Solvent refining 12
Cochran, Don 149
Coffee
  Heart attacks 55, 286
  Hyperactive child ... 27
Cohen, Charles I. 347
Cold viruses 347
Colds transmitted 61
Cole, Glen 295
Coleman, Douglas 341
Coleman, James S. 90
Colgate, Stirling A. 167, 232
Collins, John H. 154
Collins, Larry 227
Color-coded world map 168
Coma Berenices 154
Comet Bennett 25
Comet Kohoutek 18, 24, 25, 276, 277, 344
  Visibility schedule ... 294
  Yields data 262
Comets
  Nucleus and tails ... 25
  Origins of 25
Comfort, Alexander 54
Communications, TCOM 278
Competitor's superiority 152
Computerized telescope 279
Computerized turtle 76, 77
Computers
  Disposable 229
  Chemical synthesis ... 137
  Fluid motion model 236
  In tandem 236, 237
  Protection 70
  Talking 74
  Translation 76
Concorde SST 5
Conrad, Charles 7, 379, 388
Continental drift
  Elastic energy 22
Continental rift
  Africa/South America 155
Contraceptive
  Injectable 296
Convair 990 137
Cook, G. E. 309
Coon, Carleton S. 86
Cooper, Donald 94

Copper, Liver retains 206
Corn, Improved 86
Cornea transplant 4
Corona
Shockwaves 123
X-rays 120, 121
Corona bubble 103
The Cosmic Connection 323
Cosmic-ray kink 164
Cosmic-ray showers 277
Cosmic rays
Antiprotons 9
Mutations 284
Cosmonauts
Docking tapes 78
In U.S. 23
Soyuz 12 214
Soyuz 13 388
Cosmos 605 311
Cotman, C. 152
Cottrell, Eric C. 388
Coucke, M. 381, 382
Council for Science and Society 54
Cousteau, Jacques 181
Craig, Timothy T. 380
Craighead, Frank 295
Cramps 91, 94
Crankshaw, Edward 54
Crayton, John W. 61
Cree Indians 312
Crick, Francis H. C. 31
Crocodile sounds 232
Cross-beam techniques 345
Cultured skin cells 4
Cunningham, N. William 73
Cunningham, Walter 231
Current, Jet-like 58
Cusped fields fusion 346
Cyclic AMP
Heart contractions 361
NGF 229
Sciatic nerve 314
Cyclone Bebe 183
Cygnus X-3 102
Cytochalasin B 167

D

DDT residues
In eggshells 296
Premature sea lions 206
DNA molecule 334
DNA-protein interactions 342
DNA replication model 168
DNA synthesis 4
Daddario, Emilio Q. 156, 295
Dague, Phyllis 158, 159
Dales, Samuel 3
Darrow, Dan 45
Data bank protection 70
David, Armand 227
David, Edward E., Jr. 343
Davies, D. M. 110
Davis, John W. 52
Davis, Raymond, Jr. 102
Dawson, Terence J. 402
Deal, Paul 309
"Death with dignity" 375
Decker, Robert W. 22
Deep Sea Drilling 92, 93
Leg 30 58
Leg 31 104
Leg 32 105
Magnetic band 278
Dehn, William 168
DeLong, Robert L. 206
DeMeritte, Fred 172
Dempster, Everett R. 333
Dendrochronology 196
Denison, William C. 296
DeNoyer, John 53
Dental pain relief 8
Deodorant, Industrial 108
Depo Provera 296
Derjaguin, B. V. 133
Desert shrubs 22
Desjardins, Claude 360
Detels, Roger 74
Deuterium 264
Deuterium abundance
On Jupiter 232
Deutsch, J. Anthony 219
Developing countries 296
Diazepam (Valium) 314
Di Bona, Charles G. 5, 10, 357
Diesch, Stanley 232
Dietz, Robert S. 183
Dilatancy model 200, 201
Dilatancy theory 314
Dinman, Bertram D. 281 331
Disasters, Potential 379
Distemper 74
Dixon, William 325
Djerassi, Carl 247
Dolhinov, Phyllis 90
Dollfus, Audouin 220
Dominance hierarchies 231
Doomsday predictions 245
Doppler radar 360
Double helix, L-shaped 74
Drake, Charles L. 28
Dream Telepathy 299
Drell, Sidney D. 188
Drew, Russell C. 7
Drinking water,
Recycled 58
Driscoll, Everly 222
Drought shifting south 197
Drug-using subculture 136
Drugs
Antianxiety 389, 390
Anti-inflammatory 8
Human experimentation 215
Dubois, R. S. 206
Duncan, Robert A. 285
Dune buggies 231
Dunlap, J. L. 173
DuPont, Robert L. 136
Dwarf galaxies 154
Dwarkanth, M. 292
Dyce, R. B. 220
Dyson, Freeman J. 229

E

EMS act 87
ERTS-1
70,000 photos 53
Volcano monitoring 360
ESP and ASC 298-300
ESRO 150, 248
ESRO/ELDO
European Space Agency 87
Eagles endangered 58
Early Americans 110
Earth glitch 136
Earth photographs 196
Earth tides 22
Earthquake hazards 252
Earthquake impact 379
Earthquake prediction 200, 201
Dilatancy questioned 314
Negative effects 243
P-type seismic waves 216
Earthquake Research Board 205
Earth's core and mantle 183
Earth's magnetic field 183
Earth's magnetosphere 248
Earth's mantle 183, 285
Earth's renewal 181
Earth's shape 309
Earth's tidal bulge 155
Eaton, Jerry 200
Eberhart, Jonathan 222
Eclipse, Total 5
Ecuador skull 110
Edgerton, Harold E. 247
Edwards, Charles C. 5, 36
Eelgrass 54
Eichhorn, Heinrich 342
Einhorn, Irving N. 348, 349
Einstein, Albert 164
Eka-mercury 154
Elastic energy 22
Electric cars 135
Electricity savings 361
Electromagnetic waves 262
Electron/antineutrino track 164
Electron excitation 154
Electrophotographs 202-204
Element 204 205
Elkind, David 110
Elliott, William P. 331
El Niño 216
Elzinga, Marshall 154
Embryo implant 168
Emergency medical service 86
Emission control
Four proposals 36
Group I-IV 71
Emmons, Howard 349
Emotion, Measured 152
Enderson, James H. 296
Endrin 199
Energy, "Proton flare" 166
Energy Administration 357
Energy conservation 361
Energy crisis 163, 164, 299, 308, 391
Coal research 10-12
Energy fields 202
Energy Policy Office (EPO) 5
Energy sources
Hydrogen fuel 135
Engrams 219
Environmental Information 27
Environmental research 343
Environmental stimulation 27
Environmental studies 206
Environmentalists
Energy programs 163, 164
vs. timbermen 138-140
Enzymes
Oxidative and glycolitic 279
Epilepsy control 132
Erchul, F. James 163
Erickson, Donald 91
Esaki, Leo 260
Essentic form 152
Ethics of land use 266-268
Ethiopian sorghum 212
Ethnic groups
Enzyme variations 334
In USSR 170
Ethology
Nobel Prizes 244
Eugenics, Test-tube conceptions 168
Europa, Jupiter's
Polar cap 183
European Space Agency 87, 150
Europium gas laser 380
Euthanasia, Rejected 375
Evans, John C. 102
Evans, Ronald E. 23
Evolution
Cultural 362-365
Earth forces 181
Predator and prey 217
Ewbank, Walter J. 388
Ewing, W. Maurice 247
Explosion, Catastrophic 167
Extrasensory perception 298-300
Extraterrestrial life 29-31

F

F-111, Movable-wing 315
FAMOUS 104, 181
FDA, New drug experimentation 215
Faith healers' fingers 203
Falcon pairs 158
Falk, Carl 38
Faller, James 292
Falor, William H. 402
Family size 217
Fat, Unsaturated 154
Fault zones, Mapping 252
Fazio, G. G. 264
Federal Energy Administration 357
Feinstone, Stephen M. 359
Felger, Richard 54
Ferromagnet, Organic 373
Fetuses, Treated 74
Filipchenko, Anatoliy V. 23
Finback whale 231
Fineberg, S. Edwin 86
Fingertips, Emotion 152
Fink, Daniel J. 53
Finkelstein, Jordan W. 134
Fire research 348, 349
Fire retardants 349
Fireflies 360
Fischer, Ernst Otto 261
Fischer-Tropsch reaction 340
Fish consumption, U.S. 9
Fletcher, James 276
Flood overview, ERTS-I 53
Florida shore line 285
Fluid physics effect 312
Fogel, Seymour 332
Foraging behavior, Ants 232
Ford, W. Kent, Jr. 114, 316
Fordyce, Wilbert E. 253
Forest mismanagement 139, 140
Forester-executives 138
Forests, Strip mining 37
Forests, into farmlands 156
Ft. Detrick laboratories 56, 57
Fossil tracks 85
Fossils, Pliocene 34
Four-nuclei cells 167
Fowler, W. B. 26
Fowler, William 246
Fox, Sidney W. 148
Frace, Charles 268
Frazier, Kendrick 374
Frederick Cancer Research Center 56, 57
Freedman, Alfred M. 230, 295
French, Bevan M. 183
Frey, Peter 346
Fri, Robert W. 10, 36, 70, 71
Friberg, Jan 182
Friedman, Glenn 109
Frost, Barrie 312
Fuel cost comparison 285, 359
Fuel shortages 308
Fuels, Emulsified 388
Funafuti Atoll 183
Furth, H. P. 36
Fusion, Controlled
Alcator device 380
Cusped fields 346
Gas laser 199
Neutral-beam heating 36
Fusion-and-fission 292
Fyfe, W. S. 155

G

Gabor, Denis 54
Gaisser, T. K. 9
Galactic centers
No radio waves 230
Quasar events 326
Galactic clusters
Binding mass 154, 232
Galactic nuclei
Ejecting 116
Galaxies
Blue objects 358
What shapes them? 116, 117
Galaxy M-82 113
Galaxy NGC 5194 114
Galaxy redshift 346
Gallagher, C. C. 346
Gallium arsenide crystal 74
Gamma-ray pulses 102
Gamma-ray sources 264
Ganymede
Diameter 213
Posseses atmosphere 212
Temperature 357
Ganzfeld experiment 300
Garriott, Alan I. 196
Garriott, Owen K. 55, 69, 84, 103, 123, 135, 214
Garwin, Richard L. 108
Gas, Lead-free 45
Gatewood, George 342
Gause, Raymond 103
Gavaler, John R. 179
Gay liberation 389
Geballe, T. H. 179
Gehrels, Tom 173, 372, 388
Geisler, F. H. 154
Geller, Uri 300
Gene, Sythensized 132
Genes
Repressor shuttle 342
Genetic code, Universal 31
Genetic feedback 217
Genetic repair 373
Genetic superiority 333
Genetics at UC
Berkeley 332-334
Genetics Congress in Moscow 136
Genetics teaching 334
Geodynamics project 28
U.S. program for 198
Geological scars 183
Gerber, R. A. 199
Giaever, Ivar 260
Gibson, Edward 276, 324, 344
Gillespie, Bruce A. 380
Gillett, F. C. 205
Givens, Dale R. 170
Glacier, Galloping 331
Glaser, Peter, 184
Glasgow, Gavin L. 286
Glass, Billy P. 92, 93
Glass, I. S. 216
Glass office buildings 361
Gloersen, Per 168
Glomar Challenger
Leg 30 58
Leg 31 104
Leg 32 105, 278
Gluons 189
Gnarpe, Hakan 182
Goats, Dominance 231
Goettl, John 37
Goldberg, Stanley J. 109
Goldreich, Peter 86
Goldstein, Josesph L. 314
Goldstein, Richard M. 72, 173, 220
Goldstone 210-foot dish 72
Gottlieb, Carl A. 167
Gould, Roger 152
Gouse, S. William 135
Grading, Pass-fail 346
Grasdalen, G. L. 115
Graves, Harold 43
Gravitational collapse
Limits for universe 101
Planetesimals 86
Graviton's energy 277
Gravity waves
Negative results 108, 230
Gray, Paul E. 295
Graziadei, P. P. C. 310
Green Revolution 42, 43, 333
Greene, H. Gary 252
Greene, Lloyd A. 229
Greene, Mark H. 136
Greenland, Rocks 213
Gregory, Derek P. 135
Grenell, Robert 218, 219
Gribbin, John 136
Griggs, Kyle 155
Growth control
Pineal hormone 90
Growth hormone
Improved corn 86
Peptide 245
Osteoporosis 247
Gruener, Nachman 58
Guanidine derivative 347
Gulkis, Samuel 108
Gum Nebula 375
Gunther, A. 75
Gurvich, Ilja 170
Gyrfalcon 159

H

HD on Jupiter 232
HDE 226868 341
HEW research 5, 23
Haagen-Smit, Arie Jan 247
Haase, Edward F. 26
Hadrons
Cross sections 188
Effect of gravity 101
Haensel, Vladimir 247
Hagerman, Don 149
Hall, Charles F. 325
Hall, William S. 27
Halpern, Daniel 91
Halpin, Byron 349
Hamilton, Robert 205
Hamilton, Wayne L. 22
Handler, Philip 140, 229, 334
Hannah, John A. 212
Hardin, Garrett 243
Hardy, W. D., Jr. 104
Hargraves, Robert B. 285
Harper, Marvin 293
Harper, Thomas J. 58
Harris, Henry 373
Harris, Robert 253
Harvard Project Physics 230
Harvey, Karen 380
Hasselman, Klaus 183
Hawaiian honeycreepers 109
Hawking, Stephen 180, 277
Hawkins, David 59
Hawkins, Gerald S. 28
Hawkins, Royce 135
Hawkins, W. Ross 7, 69
Hay-fever plants 166
Hayatsu, Ryoichi 340
Haynes, Vance 54
Hays, James D. 314
Hazard, C. 358
Head transplants 247
Hearing
Inaudible frequencies 361
Noise pollution 27
Heart attacks
Air pollution 281
Coffee drinkers 55, 286
Stress and 326
Heart contractions 361
Heart disease
High cholesterol 314
Heart rate, TM 378
Heart research
Lasker Awards 311
Heath, Edward 326
Heimaey volcano 167
Heimpel, A. M. 41
Hekinian, R. 285
Helvey, J. D. 26
Hendley, J. Owen 61
Henize, Karl 24, 135
Henke, R. P. 235
Henkin, Robert I. 402
Hepatitis A virus 359
Hercules X-1 264
Herman, Joseph 166
Heroin epidemic 136
Herpes virus 198
Hexachlorophene 285
Heyns, Roger W. 151
Hickman, James 204
Hier, Daniel B. 229
High Altitude Observatory 120, 121
High-school physics 230
Higher education
Deficiencies 231
Recommendations 246
Hilberry, Norman 165
Hildner, Ernest 123
Hirata, A. A. 206
Hoag, A. A. 380, 381
Hodder, R. L. 37
Hodgkin's disease
Infectious 104, 206
Not contagious 358
Hoffer, A. 59
Hohman, Berthe (Bert) 348
Holbrook, Frederick 40
Holcomb, D. J. 216
Holdridge, D. B. 173
Hominid fossil dating 310

Homo sapiens
South America 110
Specimens re-evaluated 86
Homosexuality 389
Honeycreepers 109
Honorton, Charles 298-300
Hopping, Energy of 402
Hormone LRF 21
Hormones
Trigger puberty 134
Hornung, Hilary T. 170
Horvath, Steven M. 280
Hounsfield, Godfrey 134
House, Recycled 184
Howes, M. L. 173
Hu, Jane H. 204
Hubble, Edwin 114
Hufnagel, Charles A. 4
Hulm, J. K. 179
Human adaptability 157
Human evolution 250, 251
Human experimentation 20, 181
New drugs 215
Human test-tube embryo 168
Humm, Harold J. 285
Hunters, Leptospirosis 232
Hurricane Brenda 103
Hurricane modification 110
Huson, Russell 246
Hutchinson, Neil 324
Hybrid cells, Fused 373
Hydogen, Metallic 264
Hydrogen cyanide 148
Hydrogen fluoride laser 199
Hydrogen fuel 135
Hydrogenation 232
Hydroxyl radicals 155
Hyperactive children
Coffee prescribed 27
Lead poisoning 361
Hypersonic-shaped craft 172
Hypertension
Reduced by hypnosis 217
Yoga treatment 347
Hypnosis
Reduces blood pressure 217

I

IBP studies 156, 157
ICL computer 237
IMP satellites
D, E, H and J 248
I.Q. difference 333
ITOS-E 38
Ice conditions, Arctic 58
Ice model, Molecular 8
Ice pack, North Pole 168
Illiac IV 235, 236
Image intensifiers 316, 317
Imidazole 102
Immigration quotas 165
Immune electron microscopy 359
Immunity, Cell-mediated 253
Indian Ocean current 58
Industrial smells 108
Industrialized countries 379
Infant death, Sudden 361
Infant mortality, U.S. 20, 21
Infants, Stimulation 27
Infertility, Male 182
Influenza vaccines 263
Information pollution 74
Infrared object 216
Infrasound 361
Input-output theory 261
Insect control
Biological 40, 41
Intelligence
Middle aged 231
Women on faculty 182
Intelsat IV 137
Interferon chemistry 68
Intermodal systems 170
International Biological Program 156, 157
International Magnetosphere Project 248
Interstellar clouds
Gamma rays from 264
Stars born in 115
Interstellar lithium 7 154
Interstellar molecules 340
Interstellar sulfur monoxide 167
Inyushin, Viktor 204
Io, Jupiter's 372
Ioannou, Panayiotis 168
Irrigation, Climate 26
Isaac,, Glynn 380
Isaacs, John D. 228
Isham, C. J. 101
Isli, Mohamed A. 296

J

Jackson, A. A. IV 180
Jackson, Henry 263, 266, 308
Jaffe, Jerome H. 136
Jampolsky, Gerald G. 203
Jansen, Jan K. S. 90
Japanese tree 108
Jensen, Arthur 333
Jepsen, Anders 314
Jick, Herschel 55
Joffe, J. M. 6
John, E. Roy 218, 219
Johnson, Kendall L. 204
Johnson, L. R. 314
Johnson, Paul E. 60
Johnson, Virgil A. 42
Johnson Space Center 135
Jojoba industry 26
Jones, Kenneth L. 6
Josephson, Brian 260
Jovian planets 149
Jowsey, Jenifer O. M. 247
Jupiter
Atmosphere 309
Bow shock 356
Deuterium abundance 232
Heat map 372
Magnetic field 325, 356, 357, 372
Outer planets 149
Pioneer 10 views 356, 357
Photograph 388
Proton levels 357
Radiation belts 325, 356
Satellites 183, 212, 213, 372
Solar wind 356, 357
Temperature 357
Ultraviolet data 372
Jurors' decisions 347
Jury selection 152

K

K-zero-long meson 9, 264
Kahan, Archie M. 34
Kakade, M. L. 41
Kandel, Denise 296
Kangaroo hopping 402
Kanofsky, A. S. 346
Kaplan, Bonnie 133
Kaplan, Samuel 262
Karon, Bertram P. 150
Katz, David H. 294
Keldysh, M. V. 165
Kellerman, Walter 164
Kelley, Charles D. 199
Kellog, Edwin M. 232
Kelp, Mexican 206
Kennedy, Edward M. 5, 295
Kennedy, William 91
Kerr, Clark 182, 246
Kerwin, Joseph P. 7
Kessler, Joan B. 347
Kessner, David M. 20
Khachikyan, E. E. 116
Khorana, Har Gobind 132
King-Hele, D. G. 309
Kirkpatrick, John 199
Kirlian, Semyon and Valentina 202-204
Kirlian photography 202, 203
Klein, Richard G. 86
Kleinecht, Kenneth S. 379
Klenk, K. F. 346
Klimuk, Pyotr 388
Kliore, Arvydas 372
Klopfer, Peter H. and M. S. 231
Knipling, E. F. 40
Koehler, Andreas B. 235
Kohoutek, Lubos 24
Kohoutek
18, 24, 25, 276, 277, 344
Comet yields data 262
Visibility schedule 294
Kolf, Jack L. 172
Konishi, Masakazu 109
Kouwenhoven, William Bennett 311
Kraft, Christopher C. 84, 141
Krieger, Allen 196
Krippner, Stanley 204, 299
Kristian, Jerome 326
Kriz, S. 216
Kubasov, Valeriy N. 23
Kulka, Richard A. 347
Kuppermann, Aron 344

L

L chondrites 173
LH and FSH secretions 134
LRF hormone 21
Labor productivity 214
Ladda, Roger L. 373
Laird, Melvin R. 35, 69
Lake recovery 263
Lake Superior 253
Lamb, H. H. 197
Lambert, Edward H. 91
Land-use controversy 266-268
Landowners, Private 108
Larrick, Nancy 347
Larsen, Al 140
Larsen, Rudolf R. 188
Laser light
Effect on thin film 134
Laser light pulse 199
Lasers
Europium 380
Miniature 74
Moon distance 292
New developments 228
Lasker Awards 311
Lauren, Oscar B. 108
Lava-water mix 167
Lawn growth regulator 154
Layzer, Robert B. 91
Lazarev, Vasily G. 214
Lazarus, L. 90
Lea, Susan M. 232
Lead effluents 37
Lead poisoning 361
Lead pollution 45
Leakey, Louis 53
Leakey, Richard 380
Learning process 219
Learning society 231
Lebedev, Valentin 388
Lechtig, Aaron 26
Lee, Everett S. 157
Lee, Y. F. 109
Lee, Yuan 344
Leetong, John 168
Leipuner, L. B. 312
Leonardos, O. H., Jr. 155
Leone, C. A. 227
Leonov, Aleksey A. 23, 78, 79
Leontief, Wassily W. 261
Leopold, Aldo 268
LePichon, Xavier 104
Leppaluoto, Pentti 61
Leptospirosis 232
Leukemia virus
Contagious 104
Levich, Evgeny 165
Levi-Montalcini, Rita 229
Levine, James L. 108
Levine, M. A. 346
Levy, Nelson L. 373
Lewis, Charles R. 84
Lewis, Michael 27
Lewis, Trevor 232
Li, Cho Hao 245
Lichens
Air pollution 156, 296
Lick Observatory 381
Lieberman, Philip 170
Lieberman, Rose 373
Lieske, J. H. 173
Life, Origin of 282
Lifting body X-24B 171, 172
Light amplification 316, 317
"Light of life" 202-204
Light pollution 381, 382
Lighthill (Sir) James 76
Lightning bolt 105
Lightning flashes 75
Limits to Growth 245
Linden, Leonard L. 380
Linke, Simpson 135
Linnenbom, V. J. 155
Lippert, T. H. 74
Liquid-gas trucks 184
Liquid hydrogen 179
Lithium 7 154
Lithosphere 22
Livestock feed 9
Lloyd, J. E. 360
Lohrmann, Rolfe 102
Lorenz, Konrad Zacharias 244
Lousma, Jack R. 23, 55, 69, 84, 103, 123, 135, 196, 214
Love, John A. 5, 163, 308, 357
Lovell, (Sir) Bernard 54
Lovell, James 388
Lovless, Charles 295
Low, Frank 118, 262
Lown, Bernard 326
Luminescence 154
Lunar Ranging Experiment (LURE) 292
Lundin, Bruce T. 55
Lunney, Glynn S. 23, 78, 79
Lynch, Gary 152
Lynds, Roger 117
Lysenko, T. D. 136

Mc

McCann, S. M. (Don) 21
McCord, Thomas B. 173, 221, 279
McDonough, Thomas R. 216
McEvilly, T. V. 314
McGinnies, William G. 26
MacKay, Vivian 333, 334
McKell, Cyrus M. 22
MacMurdo Station 374
McNally, D. 149
MacQueen, Robert 24, 120

M

MDA hallucinogen 110
MIT women students 312
MMT interferometer 119
Machine assembly by robot 137
Magnetic band 278
Magnetic field
IMP mapping earth's 248
Jupiter's 325, 356, 357, 372
Sun's 120
Magnetometer, Towed 182
Magnetosphere, Earth's 248
Magnets, Elemental 373
Magnuson, Warren 69
Makarian, B. E. 117
Makarian galaxies 116
Makarov, Oleg G. 214
Malaria, Avian 109
Male infertility 182
Malin, S. R. C. 183
Mallinger, William D. 110
Malone, Adrian 363
Malone, Thomas F. 38
Man, Unique 364
Managua earthquake 379
Manchiang, Niu 253
Mandela, Nelson and Winnie 164
Manganese deposits 75
Mangroves 285
Maniatis, Thomas 342
Manke, John A. 171
Mankin, Harold 141
Mansfield, Mike 69
Mantle plumes 110, 285
Mantras 377
Mao, J. C.-H. 199
Map, Color-coded 168
Maragos, James E. 183
Maran, Stephen P. 24, 262
Margon, Bruce 341
Marijuana
Not harmful 296
Parents and peers 296
THC levels 90
Tolerance to 8
Varying potency 231
Mariner 9 165
Mariner 10
Cold cameras 311
Instruments aboard 222
Launch preparations 220, 221, 375
Moon map 375
Television cameras 293, 375
Ultraviolet light 375
Mariner, Venus-Mercury 73
Marks, Lawrence 215
Marrian, Eve 347
Mars, Stable crust 75
Mars globe 165
Mars 4 55
Mars 4, 5, 6 and 7 199
Mars 5 69
Mars 6 85
Mars 7 103
Marsden, Brian 24
Mason, W. T. 109
Mass transit systems 170
Masursky, Harold 72
Mating behavior 21
Matsushiro earthquake 216
Mattheas, B. T. 179
Matthews, Clifford N. 148
Maurer, R. H. 9
Maxwell's equations 284
May, Philip R. A. 150
Mayer, Richard T. 41
Mayfield, Lewis 349
Meadows, Dennis and Donella 245
Measles virus, Slow 74
Medal of Science 243, 247
Medical legislation 35
Medical research funds 68
Medical school enrollment 346
Meditation
Physiological correlates 376-378
Prisoners 152, 380
Medvedev, Zhores A. 106, 136, 165
Megavitamin therapy 59, 60
Meinel, A. B. 118
Meltzer, Herbert Y. 61
Melzack, Ronald 184
Membrane repair 109
Memory loss, Transient 182
Memory molecules 218, 219
Mental-dental disorders 347
Mental development 110
Mental illness
Economic instability 296
Organic changes 61
Menzel, Emil W. 360
Mercury (Planet)
Close-up view 137
Mariner 10 293
Measurements 221
Rotation time 220
Sun rising on 222
Surface 221
Transit photo 311
Mercury data re-examined 155
Mercury poisoning
Iraq 34
Largely myth 45
Merimee, Thomas J. 86
Meson factory 149
Meson K-zero-long
Two-muon decay 9, 264
Mesons, Nuclear glue 189
Messenger RNA
Cell differentiation 253
Cytoplasmic proteins 286
Metal-concentrating process 75
Metcalf, J. F. 310
Meteorites
Isotope ratios 277
Organic compounds 340
Methyl mercury 34
Methyl parathion 199
Mettee, David 152
Mexican kelp 206
Meyer, Urs 6
Mice, Urine marks 360
Michael, H. N. 196
Michaelson, I. Arthur 361
Microtektites 92, 93
Mid-Atlantic Ridge
Metal concentrations 75
Project FAMOUS 181
Mid-Atlantic Rift 104
Basaltic glass 285
Migraine 109
Milky Way galaxy 117, 282
Miller, J. S. 316
Miller, Richard 202-204
Miller, Stanley L. 148, 340
Milligan, James E. 166
Millimeter-wave astronomy 264
Milne-Edwards, Alphonse 227
Milner, Max 43
Minard, Robert 148
Mini-black-holes 277
Minsky, Marvin L. 76, 229
Mizar, Navy research 182
Molecular astronomy 113
Intermediate saturation 232
Sulfur monoxide 167
Molecules
Binding energy 345
Polyatomic 345
Prebiotic soup 102
Mollusks, Wood-boring 75
Molybdenum 31, 134
Monk parakeets 180
Monsoon belt 197
Monterey Bay 252
Moon
Atmosphere 211
Distance measured 292
Soviet robot 359
Moorbath, Stephen 213
Moore, W. B. 184
Morton, Rogers 10
Moscow's trucks 184
Moser, Mary Beck 54
Mosher, Charles 52
Moss, Robert L. 21
Moss, Thelma 203
Mother's smoking 168
Motor nerves 90
Moynihan, Daniel P. 88, 134, 136
Mt. Hamiltan 381
Muir, Grainger 8
Mulholland, George 246
Multiple Mirror Telescope (MMT) 118, 119
Munch, Guido 372
Murphy, Cornelius B. 263
Murphy, Robert E. 183
Murray, Bruce 73, 375
Muscle activity 90
Muscle cramps 91, 94
Muscle-innervating nerves 278, 279
Muscle protein 154
Musgrave, Story 84
Muskie, Edmund S. 164, 280, 390
Mutations
Evolution 284, 333-334

N

NAL Neutrino Line 246
NAS reports 38, 140, 165, 198, 280, 281
NASA, Reorganizing 379
NB_3Ge 179
NGC 4258 117
NGC 5364 116
NGC 5457 116
NGC 5494 116
NOAA-3 satellite 293
Nader, Ralph 253
Naeye, Richard L. 361
Nagel, Marie-Daniele 8
Nahas, G. G. 8
Namias, Jerome 216
Nappi, Anthony 40
Narcotics use 135
National Accelerator Laboratory 246
National Academy of Sciences
Air pollution 280, 281
Geodynamics project 198
Materials policy 140
Sakharov telegram 165
Weather modification 38
National Forest Service 139
National Medal of Science 243, 247
National Research Council
Vitamin E 167
National Research Service Awards 181
National Science Board 151
National Science Foundation
Bicentennial 165
Naval petroleum 391
Naval Research Laboratory 228, 229
Navigation season, Polar 168
Neanderthal man 170
Nebula, Ultraviolet 375
Neon and argon 84
Nerve growth factor 229
Ness, Norman 24, 222
Neurons, Sprout axons 152
Neurons, Sympathetic 229
Neutral-beam heating 36
Neutrino experiments 164
Neutrinos from space 102
Neutron star
Hercules X-1 264
Pulsar periods 283
Neutrons 10^{ω} 101
Newman, P. P. 8
Niigata quake 201
Niki, Hiromi 155
Nimbus 5 data 168
Niobium and germanium 179
Nix Olympica 75
Nixon, Richard M.
Energy statement 163, 164
Noble gases 345
Nobel Prizes 244, 260, 261
Noise, Inaudible 361
Noise pollution 27
Nordberg, William 53
Norris, Forbes H. 91
North, Wheeler 206
North Pole
Ice pack 168
Pear-shaped earth 309
North Sea 183
Noyes, Robert W. 196
Nuclear Energy Commission 6
Nuclear material transport 246
Nuclear weapons 379
Nucleotides synthesized 132
Nutritional misinformation 167

O

OTA established 295
Obesity, Genetics of 341
Observatory
City lights 381, 382
Cometary 25
Computer-controlled 279
Ocean floor
Metals from 75
Rift 181
Young crust 104
Ocean rainfall 331
Ocean ridges 314
Oceans, CO source 155
Odor abatement 108
Oesterling, J. Fred 184
Oertel, Goetz 120
Office of Technology Assessment 295
O'Hora, N. P. J. 136
Oil, Foreign 164
Oil and gasoline control 358
Oil and water 388
Oil or wood fuel 285, 359
Oil Policy Committee 6
Oil spill clean-up 184
Old, James 219
Olfactory nerve 310
Olympic games 347
O'Nions, R. K. 213
Oort, Jan H. 25
Ophiuchus dark cloud 115
Oppenheimer, J. R. 165
Optical circuitry 74
Organic compounds
In meteorites 340
Organic ferromagnet 373
Organic materials 156
Orgel, L. E. 31, 102
Orion Great Nebula 112
Orme-Johnson, David 152, 378
Orthomolecular Psychiatry 59
Orville, Richard E. 105
Osmond, Humphry 59
Osteoporosis 247
Ostrander, Sheila 204
Oswalt, Dallas Leon 212
Ottinger, Lin 85
Outer planets 149
Overweight mice 341
Owen, Tobias 84, 262
Owl, Sound-collecting 109
Oxburgh, E. Ronald 110
Oxygen
Subatmospheric levels 8
Oxygen 16 277

P

PCB's 206
PMA substitute 110
PSSC and HPP 230
Pacific sea floor
Australian plate 58
Packer, Paul 37
Packham, Gordon 58
Pain, Chronic 253
Pain control 8
Acupuncture 184
Palmour, Roberta M. 333, 334
Panda, Giant 227
Pankhurst, R. J. 213
"Panspermia, Directed" 31
Papert, Seymour 76
Parakeets, Pest 180
Parapsychology research 298-300
Parents and peers 296
Particles, Point-like 189
Partons
Mini-black-holes 277
Parts of 188, 189
Partridge, R. B. 230
Partridge, T. C. 310
Pass/fail credits 346
Patel, C. H. 347
Pauling, Linus 59, 60
Pearson, Allen 294
Penny, C. J. A. 136
Pentachlorophenol 285
Peregrines 296
Cornell project 158, 159
Pesticides 199
Peterson, James T. 9, 253
Peterson, Michael R. 61
Petroleum products 391
Petroleum users 357
Pettengill, G. H. 220
Phelps, Edwin 11
Phenothiazines 150
Pheromones 204
Philippine Sea 104
Phosphate ban 263
Phosphonoacetic acid 198
Phosphorus in diet 247
Photography
Radiation field 202-204
Photon particles 188
Physical attractiveness 347
Physical Science Study Committee (PSSC) 230
Physics teaching 230, 284
Pi mesons 149
Piaget, Jean 76
Pichichero, Michael 314
Piel, Gerard 229
Pielke, Roger 34
Pienta, Roman J. 57
Pierce, John R. 228
Pieters, Carle 173
Pigeon control 61
Pikarsky, Milton 170
Pike, M. C. 358
Pineal hormone 90
Pines, David 22
Pioneer 10 (See: Jupiter) 183, 212, 213, 309, 325, 356, 357, 372, 379, 388
Pioneer 11 103, 213, 325, 357
Pitman, Walter C. III 314
Pituitary gland 134
Placental growth 26
Plagemann, Stephen 136
Planetary exploration 123, 323
Planetesimals 86
Planets, Jovian 149
Plant growth regulator 154
Plasma, Cusped fields 346
Plate tectonics
Benjamin Franklin 28
ERTS photographs 53
Elastic energy 22
Geodynamics project 198
Mantle plumes 110
Sea-floor metals 75
Seamounts 331
Volcanoes 26
Play, Importance of 90
Pliocene fossils 34
Plumes, Wandering 285
Plutonium shipments 246
Podyapolski, Grigory 230
Pogo, Beatrice G. T. 3
Pogue, William 276, 324, 344
Polan, Adele K. 206, 358
Polar cap, Europa's 183
Polar ice cap
Anachronism 285
Map corrected 168
Polar navigation 168
Polio vaccine 286
Pollack, James B. 379
Pollen grains 166
Pollution monitoring 296
Polyphosphates 102
Polywater 133
Pompidou, Georges 326
Ponte, Vincent 170
Porphyria 6
Post, Austin 331
Pounder, Edwin 165
Pot smokers 90
Potato plant aphids 40
Poza, Fausto 312
Practolol 215
Predator-prey populations 217
Pregnancy
Malnutrition 26
Lowered immunity 253
Prenatal care 21
Pressure-wave changes 200
Price, Charles C. 379
Primakoff, Paul 90
Primordeal material 276
Prisoners meditating 152, 378
Project Cyclops 30
Project FAMOUS 181
Project Skywarn 294
Project Skywater 34
Project Smoke 348, 349
Proper-motion study 119
Protein, Abnormal 206
Protein content increase 42, 43
Protein evolution 148
Proteins, Complement 373
Proteins, Cytoplasmic 286
"Proton flare" 166
Proton radiography 234, 235
Proton scattering 346
Proton synchrotron
NAL 312
Proton's magnetic form 188
Protons
No eka-mercury 154
Protostars 115
Psychiatrists
Behavior therapy 106
Megavitamin therapy 59, 60
Psychiatry, USSR 230, 295
Psychical research 204, 298-300
Psychologists 150
Psychopharmacology 389
Psychotherapy 150
Ptashne, Mark 342
Pterosaur tracks 85
Puberty 134
Puddy, Don 70
Pulsed light 134
Purton, C. R. 213

Q

Quark search 312
Quarks
Mini-black-holes 277
Proton scattering 346
Quarles, John R., Jr. 23, 70
Quasar 4C37.43 346
Quasar OQ 172 317
Quasar 3C 286 101
Quasar-galaxy
Same redshift 346
Quasar redshifts
Discrepancies 358
Quasars 112, 113
Near edge of universe 101
X Comae Berenices 326
Quiescence, State of 378

R

R & D decline 214
RNA-directed DNA synthesis 148
Races, Origin of 86
Racial differences 334
Radar maps, Venus 73
Radford, Edward 281
Radiation-field photography 203
Radin, David N. 333
Radio astronomy
Collaboration 230
Radio emission
Galaxies 116
Radio signals
Extraterrestrial 30
Intelligent 262
Radio sources
Discrepant redshifts 358
Radio stars, Six new 213
Radio telescope
Metropolitan New York 264
Radioactive thorium 155
Radiocarbon chronology 86
Radiocarbon dating
Recalibrating 196
Radiographs, Heavy-particle 234, 235
Radon emission 201
Ragweed allergen 294
Rainfall over oceans 168, 331
Raiti, Salvatore 134, 245
Ralph, E. K. 196
Ramsey, Paul 168
Randall, John E. 75
Rapid-transit systems 170
Rasmussen, D. H. 108
Rasool, Ichtiaque 220
Rauscher, Frank, Jr. 35, 69
Recycled house 184
Recycled sewage 58
Redshifts
Noncosmological 358
Quasar-galaxy 346
3C 286 quasar 102
Velocities 114
Reed, John F. 157
Reed, R. K. 331
Reeves, E. M. 121, 123, 166
Regeneration 311
Rehm, Andrew 285
Reitz, L. P. 42
Renfrew, Colin 28
Repressor-operator-operon 342
Research, HEW 5, 23
Reverse transcription 148, 149
Rheumatoid arthritis 206
Rhine, J. B. 298
Rhinovirus, Dried 61
Rho Ophiuchi cloud 264
Ribicoff, Abe 215
Richardson, Peter H. 312
Rift, Volcanic activity 104
Rift zone 181
Riley, D. A. 278
Riskin, John 152
Ritzmann, Roy 75
Roberts, Donald W. 40
Roberts, Morton S. 101
Robinson, Lloyd B. 119, 358
Robot "spider" 359
Robots, Industrial 137
Rocks, Oldest 34, 213
Rodent control 61
Roemer, Elizabeth 262, 277
Roemer, V. M. 74
Rogers, Carl R. 150
Rogers, Paul G. 5, 68
Rogerson, John B. 101
Rona, Peter A. 75
Roscoe, Douglas 180
Ross, Philip N. 135
Roy, William 68
Rubin, Judith S. 114
Rubin, Robert J. 263
Rubin, Vera C. 114
Rukavishnikov, Nikolay N. 23
Rumsey, Howard C. 72
Ryan, Michael P., Jr. 180
Ryder, Norman B. 88

S

SAO 186-800 212
SP 3000 181
SPEAR detector 188, 189
SSPE
Panencephalitis 74
Polio vaccine 286
SUSTAR 154
SV 40 virus 286
Sabin, Albert 5, 56
Sachs, Robert 15
Saculles, Julia 348, 349
Sagan, Carl 30, 84, 222, 309, 323
Sagdeyev, Roald 199
Sahara Desert 197
Saint-Paul, M. 373
Sakharov, Andrei 165, 230
Salam, Abdus 101, 164
Sandage, Alan 114
Sandia laser 199
Sandwich molecule 261
Sanford, Peter 341
Sanger, G. M. 118, 119
Sarfatt, Jack 277
Sargent, W. L. W. 326, 358
Sarich, Vincent M. 227
Satellite-cable TV 74, 137
Satellite seismometers 360
Satiety factor 341
Sato, T. 108
Saturated fat 154
Saturn
Magnetosphere 216
Ring of gas 216
Satellite
Titan 84, 205, 216
Saudi Arabian oil 163
Sauerhoff, Michell W. 361
Saunders, I. 183
Sawhill, John 52, 358
Scanning electron microscope 213
Schawlow, Arthur L. 228
Schedl, Paul 90
Schizophrenia
Megavitamin therapy 59, 60
Psychotherapy 150
Schmidt, Alexander M. 215
Schnackenberg, Robert C. 27
Schneider, William C. 55
Schoening, W. E. 381, 382
Scholz, Christopher H. 200
Schroeder, Henry A. 44, 45
Schroeder, Lynn 204
Schultz, George 52, 243
Schumm, Dorothy E. 286
Schwartz, Gary E. 378
Schwartz, Ronald S. 236
Schweikart, Rusty 135
Sci galaxies 114
Sciatic (hip) nerve 314
Science
Airborne 137
Applied 343
Bicentennial symbol 165
Council for 54
Frontiers of 228, 229
Photography 388
Values of 362-365
Science advisor 52
Science and Man in the Americas 28
Science and technology
Public attitude 151
STPO 7
Wrongly blamed 295
Science enrollment 215
Science Indicators 151, 214
Science policy
OTA 295
President's Office 52
Time of transition 343
Scientific information 74
Scientific meetings 60
Scientific progress 343
Scientists
Astronauts 379
IBP teams 157
Sakharov campaign 165
Scientists, USSR 106
Scientists and engineers 215
Scoles, Giacinto 344
Scorpius X-1 196, 264
"Scotophobin" 218
Sea-breeze patterns 34
Sea-floor lava 181
Sea-floor life 228, 229
Opportunistic species 75
Sea-floor spreading
Mid-Atlantic Ridge 104
Sea level raised 314
Sea lion birth 206
Sea of Japan 104
Sea-surface 183
Seaborg, Glenn T. 14, 15
Seamounts
Ages of 105
Punched up 331
Sedatives
Increase appetite 314
Sedimentary rocks 213
Seismic waves, P-type 216
Seitz, Frederick 247
Sekanina, Zdenek 25
Senility treatment 182
Sensorimotor rhythm 133
Serotonin injection 90
Seventies, Calm 88
Sex roles 347
Shaffer, Philip 276
Shaham, Jacob 22
Shakhbazian objects 117
Shapley, Harlow 114
Shark, White 75
Shark study 28
Shatalov, Vladimir A. 79
Shenkin, Henry A. 182

Shepard, Alan 324
Shield, Volcanoes 75
Shklovkii, I. S. 264
Shockley, William 333
Shoup, Richard 205
Shulman, R. G. 74
Shuttle orbiter 150
Shuval, Hillel 58
Shwe, Hla 284
Sieghart, Paul 54
Sigurgeirsson, Thorbjorn 167
Silicon dioxide 213
Silk, Joseph 154, 232
Simmons, Henry E. 35
Simon, Martha M. 232
Simon, Michal 232
Simon, William E. 357
Simpson, John A. 356, 372
Simpson, Ruth Dee 53
Singh, Rameshvar 212
Sixties, Turbulent 88
Skin grafts, Foreign 4
Skinhøj, Erik 109
Skinner, B. F. 106, 253
Skylab 1
Accident report 55
Biomedical report 7
Solar panel 7, 55
Skylab 1 and 2
Solar photographs 120, 121, 123
Skylab 2 7, 55
Longest spacewalk 84
Oxydizer leak 84
Photographs 249
Solar telescope data 102, 120-123, 167
"X" flares 166
Skylab 2 astronauts 23
59 days in space 196, 197
Medical tests 214
Midway point 135
Nauseous 69
Skylab 3 214
Astronauts 276
Experiments 324, 325
Repair & work 324, 344
Slatkin, M. 217
Slayton, D. K. (Deke) 23, 79, 140, 141
Slein, Milton 57
Slotnick, Daniel 236
Slow-virus diseases
Polio vaccine 286
Schizophrenia 61
Small, Ernest 231
Smallpox virus 3
Smith, David E. 155
Smith, Edward J. 356
Smith, J. Maynard 217
Smith, John 132
Smithsonian Institution 165
Smoke and gases 348
Smoking mothers 168
Smythe, G. A. 90
Snapping shrimp 75
Snezhnevsky, A. V. 230
Snow, C. P. 362
Snow, Michael H. L. 167
Snowfall, Seeding 38
Sobotovich, E. V. 34
Social issues 150
Solar corona 120, 121
Solar cycle 380
Solar eclipse, July 30 5
Solar flares
Brightness changes 120
"X-type and proton" 166
Solar-heated office 184
Solar storm 136
Solar telescope data 102, 103, 120-123
Solar winds 356, 357
Soleri, Paolo 267
Solinger, Alan 154
Sollito, Sharmon 20
Somatomedin 245
Sorghum, High-protein 212
Sound pollution 361
South Pole station 374
Souza, Kenneth A. 309
Soviet psychiatry 230, 295
Soviet robot "spider" 359
Soviet scientists 106
Soybean growth 8
Soyuz/Apollo docking 78
Soyuz crew 23
Soyuz 3 observations 388
Soyuz 12 214, 388
Soyuz 13 in orbit 388
Space laboratory
European 87, 150
Space maneuvering 103
Space photography 249
Space shuttle 150, 171
Space spider 85, 103, 135
Space welding 196
Spacewalks 84, 135
Spano, Leo A. 184
Spark chambers, Solenoid 188, 189
Special relativity 189
Species, Opportunistic 75
Speech apparatus 170
Spiegel, John 106
Sports, Combative 251
Spurling, Bob 34
Sridharan, N. S. 137
Stafford, Thomas P. 23, 78
Staggers, Harley 68
Star cluster 115
Starquakes 283
Stars 63, 126, 187, 269, 328
Beta Centauri 101
Birth of 115
Early-type 213
"Failed" 149
Formation 150
Gamma Veloruf 375
Intergalactic residue 154
Main-sequence 216
Proper motions 119
SAO 186-800 212
Stars and life 282, 283
Viewed on TV 317
Stearman, M. B. 133
Steel shortages 357
Sterilization 217
Stern, Curt 332-334
Stever, H. Guyford 7, 52, 198, 343
Steward, V. W. 235
Stockton, Alan 346
Stoffel, John 246
Stoffolano, John 40
Stoiber, Richard E. 22, 314
Stoichiometric compound 179
Stokes, William Lee 85
Stone, J. P. 349
Stone, R. P. S. 341
Stone tools dated 380
Stonehenge 28
Storage ring SPEAR 188, 189
Storr, Anthony 54
Storzer, Dietrich 92
Strathdee, J. 101
Stress
Fibrillation 326
Oral disorders 347
Strip mining 10, 11
Administration backs 163
Impact on wildlife 37
Strom, K. M. 115
Strom, Robert G. 220
Strom, S. E. 115
Struve, Otto 113
Studier, Martin H. 340
Suberate of bi 373
Sudden-death syndrome 361
Suffolk, Graham C. J. 9
Suicide prone 380
Sulfur dioxide
Coal pollutant 11
From volcanoes 314
Health hazards 280
In India 296
Sulfur monoxide 167
Sulfuric acid 379
Sun (see also: Solar)
11-year cycle 380
Supergranulation 123
Temperatures 123
Wind and wave 183
Superconductivity 179
Supercooled water 108
Supercritical wing 315
Superheavy elements 154
Supernovas
Stars and men 283
Sutherland, Earl W., Jr. 247
Swaminathan, M. S. 43
Swann, (Sir) Michael 54
Swindell, William 372
Symington, James 52
Synderman, Ralph 373

T

TARTA 170
TCOM 278
THC levels measured 90
THC-treated rats 8
TM technique 152, 376-378
Taro-sugi-san 108
Tarro, Giulio 56
Taub, Edward 376
Taub, Frieda 157
Taung skull 310
Tax, Sol 60
Taylor, C. Richard 402
Taylor, G. E. 212
Teaching machines 76, 77
Teaching rated 346
Teague, Olin 52
Technology Assessment Board 295
Teeth, Gnashing of 347
Tektite origin 92, 93
Telepathy 298-300
Telescope
Computer-controlled 279
Six-mirror array 118
Television
Causes passivity 90
Temin, Howard 148, 149
Temperature profiles 293
Terasaki, P. I. 206
Terhune, Kenneth W. 217
Tesla, Nikola 203
Test-tube conception 168
Thaddeus, Patrick 264
Thatcher, Robert 219
Thermal pollution
Climate changes 9
Neglected dangers 253
Thomas, R. Brooke 157
Thomas, Woods 212
Thong, Y. H. 253
Ti-chou, Tung 253
Tiller, William A. 203, 204
Timber demand 138
Timber management 140
Time-like form factors 189
Tinbergen, Nikolas 244
Titan's atmosphere 84, 205
Recycling 216
Tobias, C. A. 235
Tobias, Philip V. 310
Tools, Stone Age 380
Tornado warnings 360
Tornadoes
Record year in U.S. 294
Toro asteroid 173
Torres, David 300
Torrey, E. Fuller 61
Tousey, Richard 24, 102, 121
Toys, Role of 110
Trace elements 402
Trace pollutants 44, 45
Traffic control 71
Train, Russell E. 70, 163
Transcendental meditation 152, 376-378
Transit of Mercury 311
Transplant rejection 4
Transplants
Monkey heads 247
Transportation, Urban 170
Traub, W. A. 154, 232
Trauger, J. T. 232
Trench mouth 347
Transfer RNA
Structure 74
Synthesis of 90
Trucks, Liquid-gas 184
Tukey, John W. 247
Tunguska event 180
Tunneling junctions 260
Turbin, N. V. 136
Turcotte, Donald L. 110
Turner, Donald L. 331
Turner, Kenneth C. 230
Turner, Ruth D. 75
Turtle Geometry 77
Turtle grass 9
Two-muon decay 9, 264
Tynan, Eugene E. 134
Tyrosine tRNA gene 132
Tyson, J. A. 108

U

UFO detector 95
UFO reports unreliable 284
UNICON system 237
US/USSR cooperation 165
US/USSR space mission 23, 78
USSR ethnic pluralism 170
Ullman, Montague 204, 299
Ultrasonic fuel emulsifier 388
Ultraviolet emission 117,375
Ultraviolet emission 117,375
Ungar, Georges 218, 219
Unified field theory 164
Universe
Expanding 112-114, 339
Gravitational collapse 101
Less dense 101
Mini-black holes 277
Shape of 108
Zero-energy 390
Urban crowding 170
Urban migration 157
Urban sprawl 267
Urban transportation 170
Urey, Harold C. 148, 340

V

Vacuum-fluctuation zero 390
Vaiana, Giuseppe A. 120
Valium 314
Van Allen, James A. 356, 372
Van de Kamp, Peter 9, 342
van de Kruit, P. C. 116
VandenBos, Gary R. 150
van den Ende, P. 217
van der Waals force 344
van Thiel, Mathias 264
van Wyk, Judson 245
Varmus, Harald E. 149
Vassiliadis, Arthur 378
Veatch, Robert M. 20
Venera 8 312
Venice 331
Ventricular fibrillation 326
Venus
Radar map 72, 73
Sulfuric acid 379
Surface rocks 312
Venus/Mercury flyby
Mariner 10 292, 311
Mercury close-up 137
Radar probes 73
Verschuur, G. L. 30
Veyret, Cl. 373
Vianna, Nicholas J. 206, 358
Vinogradov, A. P. 312
Violence, Variables 184
Violence on TV 184
Violent behavior 170
Virgin forest 139
Virus, Hepatitis A 359
Virus enzymes 3, 4
Viruses
Defense against 68
Slow 61, 74
Viscosity 312
Vishniac, Wolf 391
Vision, Early 312
Vitamin A synthesis 137
Vitamin B
No sobering effect 8
Vitamin B_6 megadoses 59
Vitamin C megadoses 60
Vitamin E facts 167
Vogt, P. K. 149
Voiceprint errors 312
Volcanism
Martian crust 75
Volcano forecasting 21, 22
Volcano monitoring 360
Volcanoes
Plate tectonics 26
SO_2 emission 314
Undersea 331
von Frisch, Karl 244
von Gutfeld, Robert J. 134

W

Waddington, C. H. 54
Wagner, Frederick H. 157
Walberg, Herbert J. 230
Wallace, George R. 279
Wallace, Robert Keith 377
Wampler, Joseph 117, 402
Ward, Rose Marie 402
Ward, William R. 86
Warfare and aggression 250, 251
Waring, Richard 157
Warner, Donald T. 8
Warner, Richard E. 109
Warwick, James 356
Waste paper fibers 184
Waste water, Recycled 58
Water, Acidic 37
Water, Anomalous 108
Water, Recycled 58
Water molecules
Gaseous 345
Water-oil mixture 388
Water polluters, Autos 27
Wave formation 183
Wave suppression 110
Weather & Climate Modification 38
Weather forecasting
Giant buoys help 360
Sea breeze pattern 34
Weather modification 110
Weaver, James 158, 159
Weaver, Thomas A. 292
Weber, Joseph 230
Weightlessness
Exercise 7
No thermal convection 196
Red blood cells 70
Weinberg, Steven 164
Weinberger, Caspar W. 35, 68, 70, 165
Weinstock, Bernard 155
Weisskopf, Victor 15
Weitz, Paul J. 7
Welles, Samuel P. 85
Wells, Jay 94
Wells, Oliver C. 213
Wenzel, Richard P. 263
Weser, Oscar 105
Wetherill, G. W. 173
Whale, Pregnant 326
Whales, Booms 231
Wheat, High-protein 42, 43
Wheeler, John A. 228
Whillans, Ian 285
Whipple, Fred 24, 118
Whitcomb, Richard T. 247, 315
White, Paul Dudley 326
White, Robert J. 247
White blood cells 154
White dwarf 283
Whitten, Charles F. 170
Whittenberger, James L. 281
Wiens, A. L. 227
Wiesner, Jerome B. 295
Wilheit, Thomas 168
Wild rice 37
Wildlife, Strip mining 37
Wilkins, Maurice H. F. 54
Wilkinson, Geoffrey 261
Wilkniss, Peter E. 155
Willamette River 285
Williams, (Sir) George 314
Williams, J. G. 173
Wilmore, J. H. 347
Wilson, Archie F. 377
Wilson, Robert R. 247
Wilson's disease 206
Wind velocity data 360
Wing's curvature 315
Winn, William P. 75
Winquist, W. T. 378
Winstanley, Derek 197
Wise, R. A. 314
Wittig, Curt 197
Wolf, Max 326
Wolfe, John H. 356, 372
Women in sports 347
Women on faculty 182
Wood, Carl 168
Wood, Lowell L. 292
Wood-boring isopod 285
Wood-burning stoves 285
Wood vs. oil cost 285
Correction 359
World Environment and Resources Council 296
Wrixon, G. T. 230
Wyrtki, Klaus 58, 216
Wyss, M. 216

X

X Comae Berenices 326
"X" flares 166
X-ray scanners 235
X-ray sources
Black hole 341
GX2 + 5 216
GX339—4 205
ScoX-1 196
Variable 264
X-rays
Charged particles 234, 235
Intergalactic 232
K- or L-series 205
Thin-beam 135
X-24A 172
X-24B lifting body 171, 172

Y

Yariv, Amon 74
Year in review 392-395
Yellowstone grizzlies 295
Yoga exercises 347
Yogi, Maharishi Mahesh 377
York, Donald G. 101
Young, John 388
Youth in transition 90

Z

Zikria, B. A. 348
Zimmerman, G. B. 292
Zinc supplements 402
Zohar, Shalhov 220
Zoll, Paul M. 311
Zoo environment 170

Back issues of

Science News

University Microfilms, a Xerox company, provides back issues of *Science News*, in microfilm/microfiche/35 millimeter editions.

For further information, contact:

Xerox University Microfilms

300 North Zeeb Road
Ann Arbor, Michigan 48106